

SEARCHING FOR THE STARS

Badlands Observatory photographer Teresa Hofer captured this image of The Pleiades, also known as the Seven Sisters.

Badlands Observatory welcomes stargazers, researchers and others interested in pursuing the field of astronomy

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For centuries, astronomers have sought to find a scientific explanation for the Star of Bethlehem, which is described in the Gospel of Matthew as the celestial sign that led the Magi into the presence of the Christ child.

Some have speculated that the object high in the night sky could have been a supernova, a comet or possibly a conjunction of the planets Jupiter and Venus.

Accomplished astronomer Ron Dyvig has views of his own. As a researcher who adheres to scientific methods, he's a bit hesitant to plow into topics where science and faith may collide.

But when pressed to offer an educated opinion on the Christmas Star, he replies, "There are several elements that make it challenging to address from a scientific standpoint and there are a

half-dozen theories beyond what's there in the Biblical accounts. But I think it could have been a nova or the planet Venus. Venus can be remarkably bright after sunset when it appears to descend in the west for several weeks. That may have been what the Magi saw and would be something they could follow. But a lot of people have strong religious beliefs about it, and if you believe it was a miracle, then science can't really explain it adequately."

Dyvig is founder of the Badlands Observatory, which he opened for his own private viewing and independent research in 2000. Two years ago, he began renovating the facility located in the small community of Quinn just north of I-90, with the goal of one day welcoming members of the public interested in astronomy.

While the renovation project is not fully complete and a grand opening is set for next spring, Badlands

Observatory is now welcoming visitors by reservation only.

"Since we got settled into this facility, there has just been so much public interest in it that we decided to go public. It's as simple as that," Dyvig said. "Right now we're taking it slow with small groups. During the winter months our activities will be curtailed a bit, then we'll expect a busy spring."

A native of Deadwood, the 79-year old Dyvig took a keen interest in astronomy at an early age when he was



Teresa Hofer and Ron Dyvig are long-time collaborators who have opened the Badlands Observatory to public access.

introduced to the discipline by his local Boy Scout troop leader. He created his first observatory as a youngster when he made a concrete pad and a cylinder to hold his telescope in place in the middle of a rancher's field. During his high school and college years, he spent late nights scanning the skies, marveling at the vastness of the universe and hoping to discover new heavenly bodies.

As a college student, Dyvig learned and taught the art of telescope-making and became president of the Black Hills Astronomical Society. He later designed and fabricated the optics for the Hidden Valley Observatory in Rapid City.

Dyvig spent time honing his craft as a research assistant at the University of Arizona where he worked under several mentors and utilized the advanced facilities at Kitt Peak National Observatory. He was chosen to help design and test image intensifier camera systems for Steward Observatory.

While through the decades he kept day jobs to support his avocation, his evenings were spent star gazing and pursuing new discoveries. His passion and dedication to astronomy paid off when he discovered - and aptly dubbed - Asteroid 26715 South Dakota just a year after opening the Badlands Observatory. It's just one of the 25



Photographer Bob Rossiter and Ron Dyvig are shown with the 26-inch Newtonian Reflector telescope at Badlands Observatory.

discoveries credited to Dyvig during the course of his astronomy work.

Building the observatory was no small task. First, he found and converted an old medical building in Quinn to house the facility. Then he personally designed and fabricated all of the optics, including grinding and polishing the mirror for the 26-inch f/4.8 Newtonian Reflector telescope. West River Electric

Cooperative worked with Dyvig and the town of Quinn to install hoods over surrounding street lights to reduce "light pollution" and enhance the ability to scan the night sky.

Dyvig describes himself as fortunate to find a partner in Teresa Hofer, a career accountant who shares his passion for all things celestial.

There's always something to be done

at the observatory, Hofer said. Ongoing duties include maintaining and upgrading the optical and drive systems, control systems for the telescope and dome, facility management, designing and implementing new educational programs for visitors, website updates and keeping up-to-date on developments in the field of astronomy.

"There's plenty to do, especially since we decided to make the facility public after we figured people might like to see what we do," she said. "We had to make sure everything was comfortable for the public and do a lot of renovating and painting and upgrading."

Hofer said she is starting to promote the observatory as a destination for astronomy enthusiasts who might be interested in touring the facility and peering through one of seven telescopes on the observation deck. Dyvig is in the process of also building a radio telescope to add to his collection.

Those interested in experiencing the Badlands Observatory can call 605-381-1521 to set up a viewing time or visit www.badlandsobservatory.com.



The Orion Nebula has long captured the imaginations of star watchers as it has been associated with the Greek myth of a huntsman placed among the stars by Zeus.